

Synonymic Species List of Euglossini

LYNN SIRI KIMSEY AND ROBERT L. DRESSLER

(LSK) Department of Entomology, University of California, Davis, California 95616; (RLD) Smithsonian Tropical Research Institute, Apartado 2072, Balboa, Rep. of Panama.

Abstract.—A detailed checklist of all the species in the apid tribe Euglossini is given, including synonymy, complete type data and complete references.

SYNONYMIC SPECIES LIST OF EUGLOSSINI

The biology of the euglossine orchid bees has attracted increasing interest since Dodson, et al. (1969) discovered how to attract large numbers of males to chemical baits. There has also been considerable taxonomic work on this group since 1969, with a 50% increase in the number of described species.

In 1967b Moure published a checklist of the Euglossini. This checklist was invaluable at the time but now requires considerable revision. Moure listed 5 species of *Euglossa*, including *coruscans*, *cyanosoma*, *macropsectra*, *orichalcea* and *spinigaleis*, which have never been published. In addition, *Euglossa augaspis*, *iopyrrha*, *platymera*, *pleosticta* and *stilbonata* were given as Moure species. However, they were not published by Moure but were later published by Dressler (1982a, 1982b, 1982c).

As a result of this confusion, some new synonymy and many additional species, we give below a complete synonymic list of euglossine species. Subspecies are indicated by ssp. Type repositories are given in capital letters and correspond with the city of the particular museum given below.

Type repositories are as follow: BELEM—Museu Paraense Emilio Goeldi, Belem, Pará, Brazil; BERLIN—Zoologisches Museum, Humboldt-Universität, Berlin, E. Germany; BUDAPEST—Hungarian Natural History Museum, Budapest; BUENOS AIRES—Museo Nacional de Buenos Aires, Argentina; CAMBRIDGE—Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA; COPENHAGEN—Universitetes Zoologiske Museum, Copenhagen, Denmark; CUREPE—Commonwealth Institute of Biological Control, Curepe, Trinidad; CURITIBA—Universidade Federal do Parana, Curitiba, Brazil; DAVIS—Bohart Museum of Entomology, University of California, Davis, USA; GAINESVILLE—Florida State Museum, University of Florida, Gainesville, USA; GENEVA—Museum of Natural History, Geneva, Switzerland; GENOA—Museo Civico di Storia Naturale, Genoa, Italy; LAWRENCE—Snow Museum, University of Kansas, Lawrence, USA; LONDON—British Museum (Natural History), London, England; MUNICH—Zoologische Sammlung des Bayerischen Staates, Munich, W. Germany; NEW YORK—American Museum of Natural History, New York, USA; OXFORD—Hope Entomological Collections, Oxford University Museum, England; PARIS—Museum National d'Histoire Na-

turelle, Laboratoire d'Entomologie, Paris, France; SAN JOSE—Department of Entomology, University of Costa Rica, San Jose; SAO PAULO—Museu de Zoologia, Universidade de São Paulo, Brazil; STOCKHOLM—Naturhistoriska Riksmuseet, Stockholm, Sweden; TURIN—Istituto e Museo di Zoologia, Università di Torino, Turin, Italy; UPPSALA—Zoological Institute, University of Uppsala, Sweden; VIENNA—Zweite Zoologische Abteilung, Naturhistorisches Museum, Vienna, Austria; WASHINGTON—U.S. National Museum of Natural History, Washington, D.C.

Aglae Lepeletier and Serville

Aglae caerulea Lepeletier and Serville, 1825:105. Lectotype female; French Guiana: Cayenne (TURIN).

Eufriesea Cockerell

- aeniventris* (Mocsáry), 1896:5. (*Euglossa*). Lectotype female; Brazil: Espirito Santo (TURIN).
anisochlora (Kimsey), 1977:8. (*Euplusia*). Holotype male; Panama: Panama Prov., Cerro Jefe (DAVIS).
auripes (Gribodo), 1882:226. (*Euglossa*). Holotype male; French Guiana: Cayenne (GENOA).
boharti (Kimsey), 1977:10. (*Euplusia*). Holotype male; Venezuela: Aragua, Rancho Grande (DAVIS).
brasilanorum Friese, 1899:147. (*Euglossa combinata* ssp.). Holotype male; Brazil: Espirito Santo (BERLIN).
caerulescens (Lepeletier), 1841:1. (*Euglossa*). Holotype male; "Mexico" (PARIS).
simillima (Moure and Michener in Moure), 1965:275. (*Euplusia*). Holotype male; Mexico: Chihuahua, Maguarichic (LAWRENCE).
chalybaea (Friese), 1923:27. (*Euglossa*). Holotype male; Bolivia: Tarata (NEW YORK).
chrysopyga (Mocsáry), 1898:497. (*Euglossa*). Lectotype female; Bolivia: "Songo" (BUDAPEST).
combinata (Mocsáry), 1897:446. (*Euglossa*). Lectotype female; Bolivia: Antonio (BUDAPEST).
concava (Friese), 1899:151. (*Euglossa mexicana* ssp.). Lectotype male; Nicaragua (BERLIN).
convexa (Friese), 1899:151. (*Euglossa mexicana* ssp.). Holotype female; "Brasilia" (BUDAPEST).
corusca (Kimsey), 1977:10. (*Euplusia*). Holotype male; Panama: Zona del Canal, Barro Colorado Island (DAVIS).
distinguenda (Gribodo), 1882:267. (*Euglossa*). Holotype male; French Guiana: Cayenne (GENOA).
dentilabris (Mocsáry), 1897:443. (*Euglossa*). Holotype male; Brazil: Espirito Santo (BUDAPEST).
dressleri (Kimsey), 1977:12. (*Euplusia*). Holotype male; Panama: Zona del Canal, Piña area (DAVIS).
duckei (Friese), 1923:28. (*Euglossa*). Holotype female; Brazil: Para, Macapa (NEW YORK).
eburneocincta (Kimsey), 1977:12. (*Euplusia*). Holotype male; Guyana: Dawa (WASHINGTON).
elegans (Lepeletier), 1841:13. (*Eulaema*). Holotype female; French Guiana: Cayenne (TURIN).
excellens (Friese), 1925:27. (*Euglossa*). Holotype male; Ecuador: Guayaquil (BERLIN).
fallax (F. Smith), 1854:381. (*Euglossa*). Lectotype male; Brazil: Pará (LONDON).
flaviventris (Friese), 1899:152. (*Euglossa mexicana* ssp.). Lectotype female; Brazil (BUDAPEST).
formosa (Mocsáry), 1908:581. (*Euglossa*). Holotype female; Brazil: Amazonas, Tefe (BUDAPEST).
fragrocara Kimsey, 1977:13. (*Euplusia*). Holotype male; Peru: Huanuco, Rio Pachitea (DAVIS).
laniventris (Ducke), 1902b:573. (*Euglossa*). Lectotype male; Brazil: Pará, Belem (BELEM).
limbata (Mocsáry), 1897:442. (*Euglossa*). Holotype female; Brazil: Piauí (BUDAPEST).
basalis (Friese), 1898:203. (*Euglossa*). Lectotype female; Surinam (BERLIN).
lucida (Kimsey), 1977:13. (*Euplusia*). Holotype male; Colombia: Valle, Anchicaya (DAVIS).
lucifera Kimsey, 1977:18. Holotype male; Panama: Panama, El Llano-Carti Rd., 19 km N El Llano (DAVIS).
macroglossa (Moure), 1965:274. (*Euglossa*). Holotype male; Costa Rica: Turrialba (LAWRENCE).
magrettii (Friese), 1899:148. (*Euglossa*). Lectotype male; Venezuela (GENOA).
magrettii fulvohirta (Friese), 1899:148. (*Euglossa*). Lectotype male; Venezuela (GENOA).
andina (Friese), 1925:27. (*Euglossa*). Lectotype female; Peru: Vilcanota (BERLIN).
mariana (Mocsáry), 1896:4. (*Euglossa*). Holotype female; Bolivia: Bueyes (BUDAPEST).
superba (Mocsáry), 1898:498. (*Euglossa*). Holotype male; Bolivia: "Songo" (BUDAPEST).
pulcherrima (Friese), 1923:27. (*Euglossa*). N. name for *superba* Mocsáry, 1898, nec Hoffmannsegg, 1817.
mariae (Friese), 1940:158. (*Euglossa*). Lapsus for *mariana* Mocsáry, 1898.
mexicana (Mocsáry), 1897:444. (*Euglossa*). Lectotype female; Mexico: Presidio (BUDAPEST).

- mussitans* (Fabricius), 1787:301. (*Apis*). Holotype female; French Guiana (COPENHAGEN).
- mexicana inermis* (Friese), 1899:151. (*Euglossa*). Lectotype male; Venezuela (NEW YORK).
- nigrescens* (Friese), 1925:27. (*Euglossa*). N. name for *magretti nigrita* Friese, 1903.
- magrettii nigrita* (Friese), 1903:574. (*Euglossa*). Lectotype female; Ecuador: Balzapampa (WASHINGTON). Nec Lepeletier.
- longipennis* (Friese), 1925:28. (*Euglossa*). Holotype female; Ecuador: Guayaquil (BERLIN).
- nigrohirta* (Friese), 1899:142. (*Euglossa*). Holotype female; Brazil: Pará (BERLIN).
- opulenta* (Mocsáry), 1908:582. (*Euglossa*). Holotype male; Peru: Chanchamayo (BUDAPEST).
- ornata* (Mocsáry), 1896:3. (*Euglossa*). Holotype male; Brazil: Pará (BUDAPEST).
- pallida* (Kimsey), 1977:15. (*Euplusia*). Holotype male; Mexico: Chiapas, Tuxtla Gutierrez (GAINESVILLE).
- pretiosa* (Friese), 1903:575. (*Euglossa*). Holotype female; Ecuador: Santa Inez (NEW YORK).
- pulchra* (F. Smith), 1854:381. (*Euglossa*). Holotype female; Brazil: Pará, Tapajos (LONDON).
- purpurata* (Mocsáry), 1896:127. (*Euglossa*). Lectotype female; Peru: Iquitos (BUDAPEST).
- rufocauda* (Kimsey), 1977:15. (*Euplusia*). Holotype male; Panama: Panama, Cerro Campana (DAVIS).
- rugosa* (Friese), 1899:152. (*Euglossa*). Lectotype female; Mexico (BERLIN).
- schmidtiana* (Friese), 1925:26. (*Euglossa*). Lectotype male; Costa Rica: Sarapiquí (BERLIN).
- superba* (Hoffmannsegg), 1817:52. (*Plusia*). Holotype male; Brazil: Pará (WASHINGTON).
- manni* (Cockerell), 1912:41. (*Eulaema*). Holotype male; Brazil: Rondônia, Abuna (WASHINGTON).
- surinamensis* (Linnaeus), 1758:578. (*Apis*). Holotype female; Surinam (STOCKHOLM).
- tropica* (Linnaeus), 1758:579. (*Apis*). Holotype female; "in calidus regionibus" (UPPSALA).
- abdomenoflavum* (DeGeer), 1773:574. (*Apis*). Holotype male; Surinam (STOCKHOLM).
- smaragdina* (Perty), 1833:150. (*Centris*). Holotype male; Brazil: Minas Gerais (MUNICH).
- angulata* (Mocsáry), 1897:443. (*Euglossa*). Lectotype female; Brazil: Piauí (BUDAPEST).
- bruesi* (Cockerell), 1914:307. (*Eulaema*). Holotype female; Ecuador: Guayaquil (WASHINGTON).
- amabilis* (Cockerell), 1917:16. (*Eulaema*). Holotype male; Brazil: Amazonas, Manaus (WASHINGTON).
- tectora* (Kimsey), 1977:16. (*Euplusia*). Holotype male; Panama: Zona del Canal, Frijoles (DAVIS).
- theresiae* (Mocsáry), 1908:581. (*Euglossa*). Holotype female; Brazil: Amazonas, Tefe (BUDAPEST).
- tucumana* (Schrottky), 1902:117. (*Euglossa*). Holotype female; Argentina: Tucuman (BUENOS AIRES).
- venezolana* (Schrottky), 1913:708. (*Centris*). Holotype male; Venezuela (SAO PAULO).
- buchwaldi* (Friese), 1923:27. (*Euglossa*). Lectotype female; Peru (BERLIN).
- venusta* (Moore), 1965:273. (*Euplusia*). Holotype female; Panama: Panama, Cerro Campana (LAWRENCE).
- vidua* (Moore), 1976:277. (*Euplusia*). Holotype female; Surinam (repository unknown).
- violacea* (Blanchard), 1840:405. (*Euglossa*). Holotype female; Brazil (type lost).
- danielis* (Schrottky), 1907:56. (*Eumorpha*). Holotype female; Paraguay: Asuncion (type lost).
- violascens* (Mocsáry), 1898:497. (*Euglossa*). Lectotype female; Bolivia: "Songo" (BUDAPEST).
- auriceps* (Friese), 1899:156. (*Euglossa*). Holotype male; Paraguay: Asuncion (WASHINGTON).
- xantha* (Kimsey), 1977:17. (*Euplusia*). Holotype male; Guyana: Rockstone, Mazaruni-Potaro (DAVIS).

Euglossa Latreille

- alleni* Moore, 1968:35. Holotype male; Costa Rica: Puntarenas, Palmar (WASHINGTON).
- allosticta* Moore, 1969:242. Holotype male; Panama: Zona del Canal, Gamboa (WASHINGTON).
- amazonica* Dressler, 1982c:146. Holotype male; Brazil: Pará, Belem, IPEAN (WASHINGTON).
- analís* Westwood, 1840:262. Lectotype male; Brazil: Amazonas (OXFORD).
- bicolor* Ducke, 1902b:565. Lectotype male; Brazil, Pará, Belem (BELEM).
- annectans* Dressler, 1982c:127. Holotype male; Brazil: Guanabarra, Floresta de Tijuca (WASHINGTON).
- asarophora* Moore, 1969:239. Holotype male; Peru: Iquitos (LONDON).
- atroveneta* Dressler, 1978a:177. Holotype male; Guatemala: Santa Rosa (WASHINGTON).
- augaspis* Dressler, 1982b:133. Holotype male; Brazil: Amazonas, Manaus (WASHINGTON).
- aureiventris* Friese, 1899:135. Lectotype female; Brazil (VIENNA).
- auriventris* Friese, 1925:29. Syntype females; Brazil: Rio Branco, Ecuador: Guayaquil (BERLIN).

- avicula* Dressler, 1982c:146. Holotype male; Brazil: Espirito Santo, Conceição da Barra (WASHINGTON).
- azureoviridis* Friese, 1930:137. Lectotype male; Costa Rica: San Jose (BERLIN).
- nigrescens* Friese, 1930:137. Lectotype female; Costa Rica: San Jose (BERLIN).
- bidentata* Dressler, 1982a:122. Holotype male; Peru: Huanuco, Lullapichis, Rio Pachitea (WASHINGTON).
- bigibba* Dressler, 1982a:128. Holotype male; Peru: Tebas (=Pebas) (BUDAPEST).
- bursigera* Moure, 1970:151. Holotype male; Panama: Zona del Canal, Barro Colorado Is. (CURITIBA).
- ssp. *bursigera cupreicolor* Moure, 1970:152. Holotype male; Costa Rica: Pozo Azul, San Jose (CURITIBA).
- carinilabris* Dressler, 1982b:134. Holotype male; Brazil: Bahia, Itabuña (WASHINGTON).
- chalybeata* Friese, 1925:29. Lectotype male; Brazil: Pará, Belem (BERLIN).
- ssp. *chalybeata iopoecila* Dressler, 1982a:126. Holotype male; Brazil: Paraná, Alexandra (WASHINGTON).
- championi* Cheesman, 1929:148. Lectotype male; Panama: Chiriquí (LONDON).
- charapensis* Cockerell, 1917:146. Holotype female; Peru: Rio Charape (WASHINGTON).
- chlorina* Dressler, 1982c:141. Holotype male; Venezuela: Caracas (WASHINGTON).
- cognata* Moure, 1970:156. Holotype male; Brazil: Mocajuba (Mangabeira) (CURITIBA).
- cordata* (Linnaeus), 1758:572. Holotype male; "Guianas" (STOCKHOLM).
- crassipunctata* Moure, 1968:40. Holotype male; Panama: Zona del Canal, Gamboa (WASHINGTON).
- crininota* Dressler, 1978a:176. Holotype male; Mexico: Veracruz, Cordoba (WASHINGTON).
- cyanaspis* Moure, 1968:46. Holotype male; Panama: Zona del Canal, Diablo Heights (WASHINGTON).
- cyanea* Friese, 1899:135. Lectotype female; Bolivia: San Antonio (BUDAPEST).
- cyanura* Cockerell, 1917:146. Holotype male; Panama: Colón, Porto Bello (WASHINGTON).
- cybelia* Moure, 1968:26. Holotype male; Panama: Panama Prov., Cerro Campana (WASHINGTON).
- deceptrix* Moure, 1968:58. Holotype male; Panama: Panama, Cerro Campana (WASHINGTON).
- decorata* F. Smith, 1874:444. Holotype female; Brazil: Amazonas, São Paulo de Olivença (LONDON).
- ssp. *ruficauda* Cockerell, 1918:688. Holotype female; Guyana: Kalacoon (NEW YORK).
- despecta* Moure, 1968:55. Holotype male; Panama: Zona del Canal, Barro Colorado Is. (WASHINGTON).
- dissimula* Dressler, 1978a:173. Holotype male; Panama: Panama, Cerro Campana (WASHINGTON).
- dodsoni* Moure, 1965:266. Holotype female; Costa Rica: Turrialba (LAWRENCE).
- dressleri* Moure, 1968:29. Holotype male; Panama: Zona del Canal, Gamboa (WASHINGTON).
- erythrochlora* Moure, 1968:32. Holotype male; Costa Rica: Puntarenas, San Vito (WASHINGTON).
- flammea* Moure, 1969:231. Holotype male; Panama: Zona del Canal, Gamboa (WASHINGTON).
- fuscifrons* Dressler, 1982b:134. Holotype male; Ecuador, Napo, Veracruz (WASHINGTON).
- gaianii* Dressler, 1982c:142. Holotype male; French Guiana: 12 km SW Kourou (WASHINGTON).
- gibbosa* Dressler, 1982c:147. Holotype male; Ecuador: Pichincha, Santo Domingo (WASHINGTON).
- gorgonensis* Cheesman, 1929:146. Holotype male; Costa Rica (LONDON).
- ssp. *gorgonensis erythrophana* Dressler, 1978a:170. Holotype male; Costa Rica: Puntarenas, Golfito (WASHINGTON).
- granti* Cheesman, 1929:147. Holotype female; Colombia: Gorgona Is. (LONDON).
- hansonii* Moure, 1965:269. Holotype female; Panama: Colón, Piña area (LAWRENCE).
- hemichlora* Cockerell, 1917:146. Holotype female; Ecuador: Paramba (WASHINGTON).
- ssp. *auricollis* Friese, 1923:26. Lectotype female; Ecuador: Guayaquil (BERLIN).
- heterosticta* Moure, 1968:52. Holotype male; Panama: Panama, Cerro Campana (WASHINGTON).
- hyacinthina* Dressler, 1982b:135. Holotype male; Panama: Chiriquí, Fortuna Dam (WASHINGTON).
- ignita* F. Smith, 1874:444. Holotype male; Jamaica (LONDON).
- ssp. *chlorosoma* Cockerell, 1918:688. Holotype female; Guyana: Bartica Dist. (NEW YORK). NEW SYNONYMY.
- igniventris* Friese, 1925:29. Holotype female; Costa Rica: San Jose, La Caja (WASHINGTON).
- ssp. *cupreiventris* Cheesman, 1929:146. Holotype female; Panama (LONDON).
- imperialis* Cockerell, 1922:6. Holotype female; Panama: Rio Trinidad (WASHINGTON).
- intersecta* Latreille, 1938:273. Holotype ?; French Guiana: Cayenne (Lost).
- ssp. *brullei* Lapeletier, 1841:10. Holotype female; "Senegal" (Error—Amazon Region) (PARIS).
- ssp. *romandii* Guérin, 1845:458. Lectotype male; locality unknown (GENEVA ?).

- ioprosopa* Dressler, 1982a:124. Holotype male; Peru: Huanuco, Llullapichis, Rio Pachitea (WASHINGTON).
- iopyrrha* Dressler, 1982a:123. Holotype male; Brazil: Pará, Obidos (WASHINGTON).
- jamaicensis* Moure, 1968:43. Holotype male; Jamaica (CURITIBA).
- laevicincta* Dressler, 1982b:136. Holotype male; French Guiana: 19 km SW Kourou (WASHINGTON).
- lazulina* Friese, 1923:26. Holotype female; Brazil: Pará, Obidos (BERLIN).
- liopoda* Dressler, 1982c:143. Holotype male; Venezuela: Bolivar, Rio Chicanan (WASHINGTON).
- macrorhyncha* Dressler, 1982b:136. Holotype male; Ecuador: Pichincha, Santo Domingo (WASHINGTON).
- maculilabris* Moure, 1968:23. Holotype male; Panama: Panama, Cerro Campana (WASHINGTON).
- magnipes* Dressler, 1982c:148. Holotype male; Peru: Huanuco, Llullapichis, Rio Pachitea (WASHINGTON).
- mandibularis* Friese, 1899:137. Lectotype female; Brazil: Rio Grande do Sul, Santa Cruz do Sul (BERLIN).
- bernardina* Cockerell, 1917:144. Holotype male; Paraguay: San Bernardino (WASHINGTON).
- aenescens* Friese, 1925:28. Lectotype male; Brazil: Mato Grosso, Passa Quatro (BERLIN).
- melanotricha* Moure, 1967 (*In* Sakagami et al.):47. Holotype male; Brazil: Mato Grosso, Araxa (CURITIBA).
- micans* Dressler, 1978a:175. Holotype male; Costa Rica: Heredia, Puerto Viejo, La Selva (WASHINGTON).
- mixta* Friese, 1899:135. Lectotype male; Panama: Chiriquí (BUDAPEST).
- modestior* Dressler, 1982c:143. Holotype male; Peru: Loreto, Iquitos (WASHINGTON).
- mourei* Dressler, 1982c:148. Holotype male; Colombia: Amazonas, Leticia (WASHINGTON).
- nigropilosa* Moure, 1965:270. Holotype female; Ecuador: Tungurahua, Topo (LAWRENCE).
- nigrosignata* Moure, 1969:234. Holotype male; Panama: Coclé, El Valle de Anton (WASHINGTON).
- obtusa* Dressler, 1978a:171. Holotype male; Mexico: Veracruz, Los Tuxtlas near Montepio (WASHINGTON).
- oleolucens* Dressler, 1978a:169. Holotype male; Costa Rica: Puntarenas, Las Cruces S San Vito (WASHINGTON).
- parvula* Dressler, 1982b:137. Holotype male; Colombia: Amazonas, Leticia (WASHINGTON).
- perfulgens* Moure, 1967a:388. Holotype female; Brazil: Amazonas, Tefe (CURITIBA).
- perviridis* Dressler, 1985:78. Holotype male; Peru: Madre de Dios, 30 km SW Puerto Maldonado (WASHINGTON).
- pictipennis* Moure, 1943:191. Holotype female; Brazil: São Paulo, Batatais (CURITIBA).
- piliventris* Guérin, 1845:458. Syntype male, female; Brazil: Pará (GENOA).
- platymera* Dressler, 1982c:144. Holotype male; Brazil: Amazonas, Manaus (WASHINGTON).
- pleosticta* Dressler, 1982c:150. Holotype male; Brazil: Espirito Santo, N Linhares (WASHINGTON).
- polita* Ducke, 1902b:571. Lectotype male; Brazil: Pará, Belem (BELEM).
- prasina* Dressler, 1982b:138. Holotype male; Colombia: Amazonas, Leticia (WASHINGTON).
- purpurea* Friese, 1899:135. Lectotype male; Panama: Chiriquí (BUDAPEST).
- retroviridis* Dressler, 1982a:123. Holotype male; Colombia: Amazonas, Leticia (WASHINGTON).
- rugilabris* Moure, 1967a:391. Holotype female; Brazil: Amazonas, Tabatinga (CURITIBA).
- sapphirina* Moure, 1968:38. Holotype male; Panama: Zona del Canal, Gamboa (WASHINGTON).
- securigera* Dressler, 1982c:145. Holotype male; Brazil: Espirito Santo, Conceição da Barra (WASHINGTON).
- singularis* Mocsáry, 1899:169. Holotype female; Surinam (BUDAPEST).
- meliponides* Ducke, 1902b:569. Lectotype female; Brazil: Pará, Itaituba (BELEM).
- apiformis* Schrottky, 1911:39. Holotype female; Peru: Cuzco (Lost ?).
- stellfeldi* Moure, 1947:11. Holotype female; Brazil: Pará, Caioba (CURITIBA).
- stilbonata* Dressler, 1982b:138. Holotype male; French Guiana: 19 km SW Kourou (WASHINGTON).
- townsendi* Cockerell, 1904:24. Lectotype female; Mexico: Vera Cruz, San Rafael (NEW YORK).
- tridentata* Moure, 1970:152. Holotype male; Panama: Zona del Canal, Summit Gardens (WASHINGTON).
- trinotata* Dressler, 1982b:139. Holotype male; Colombia: El Valle, Buenaventura, Campamento de Pulpapel (WASHINGTON).
- turbinifex* Dressler, 1978a:168. Holotype male; Panama: Colón, Santa Rita ridge (WASHINGTON).

- ultima* Moure, 1968:61. Holotype male; Venezuela: Merida (BUDAPEST).
variabilis Friese, 1899:135. Lectotype male; French Guiana: Cayenne (BERLIN).
villosa Moure, 1968:17. Holotype male; Panama: Coclé, El Valle de Anton (WASHINGTON).
villosiventris Moure, 1968:20. Holotype male; Panama: Panama, Cerro Jefe (WASHINGTON).
viridifrons Dressler, 1982b:140. Holotype male; Brazil: Pará, Belem, IPEAN (WASHINGTON).
viridis (Perty), 1833:148. (*Cnemidium*). Holotype male; Brazil: Amazonas (MUNICH).
azurea Ducke, 1902b:570. Lectotype male; Brazil: Amapa, Macapa (BELEM).
viridissima Friese, 1899:136. Lectotype male; Mexico (VIENNA).

Eulaema Lepeletier

- boliviensis* (Friese), 1898:205. (*Eulema*). Lectotype female; Bolivia (BERLIN).
bombiformis (Packard), 1869:57. (*Euglossa*). Holotype female; Ecuador: Napo, Quito (CAMBRIDGE).
niveofasciata (Friese), 1899:165. (*Euglossa*). Lectotype female; Brazil: Pernambuco (VIENNA).
bomboides (Friese), 1923:28. (*Euglossa*). Lectotype female; Ecuador: Balzapamba (NEW YORK).
cingulata (Fabricius), 1804:355. (*Centris*). Lectotype female; Guyana (?) (COPENHAGEN).
fasciata Lepeletier, 1841:12. Lectotype female; French Guiana: Cayenne (PARIS).
cajennensis Lepeletier, 1841:14. Holotype female; French Guiana: Cayenne (TURIN).
leucopyga (Friese), 1898:203. (*Eulema*). Holotype female; Colombia (BERLIN).
meriana (Olivier), 1789:65. (*Apis*). Holotype male; Surinam (Lost ?).
dimidiata (Fabricius), 1793:316. (*Apis*). Holotype male; Surinam (PARIS). Nec Olivier, 1789.
quadrifasciata (Friese), 1903:575. (*Euglossa*). Lectotype male; Costa Rica: San Carlos (BERLIN).
tenuifasciata (Friese), 1925:30. (*Euglossa*). Holotype female; Bolivia: Tarata (NEW YORK).
 ssp. *meriana flavescens* (Friese), 1899:165. (*Euglossa dimidiata* ssp.). Lectotype female; Colombia (VIENNA).
 ssp. *meriana terminata* (F. Smith), 1874:442. (*Eulema*). Holotype male; Trinidad (LONDON).
mocsaryi (Friese), 1899:161. (*Euglossa*). Holotype female; Brazil (OXFORD).
nigrita Lepeletier, 1841:14. Lectotype female; French Guiana: Cayenne (TURIN).
nalis Lepeletier, 1841:14. Holotype male; Brazil (PARIS).
raymondi (Schrottky), 1907:65. (*Centris*). Lectotype female; Venezuela: Caracas (SAO PAULO).
nigriceps (Friese), 1923:27. (*Euglossa*). Lectotype male; Colombia: Cauca-Tal (BERLIN).
willei Moure, 1963:213. Holotype male; Costa Rica: Guanacaste, Rio Blanco (SAN JOSE).
peruviana (Friese), 1903:575. (*Euglossa*). Lectotype female; Peru: Cuzco, Marcapata (BUDAPEST).
polychroma (Mocsáry), 1899:170 (*Euglossa*). Holotype male; Peru: Callanga (BUDAPEST).
polyzona (Mocsáry), 1897:442. (*Euglossa*). Lectotype female; Surinam (BUDAPEST).
difficilis (Friese), 1898:206. (*Eulema*). Lectotype female; Brazil: Pará (BERLIN).
seabrai Moure, 1960:19. Holotype female; Brazil: Rio de Janeiro (CURITIBA).
 ssp. *seabrai bennetti* Moure, 1967a:384. Holotype male; Trinidad: Aripo (CUREPE).
 ssp. *seabrai luteola* Moure, 1967a:375. Holotype female; Colombia: Monte Redondo (CURITIBA).
 ssp. *seabrai mimetica* Moure, 1967a:379. Holotype male; Brazil: Pará, Obidos, Curusumba (CURITIBA).
speciosa (Mocsáry), 1897:445. (*Euglossa*). Holotype female; Panama: Chiriquí (BUDAPEST).
semirufa (Friese), 1898:204. (*Eulema*). Holotype male; Panama: Chiriquí (BERLIN).
nigrifacies (Friese), 1899:205. (*Eulema*). Holotype male; Venezuela: Santa Parima (BERLIN).
panamensis (Mocsáry), 1899:169. (*Euglossa*). Holotype female; Panama: Chiriquí (BUDAPEST).
sarapiquiensis (Friese), 1925:30. (*Euglossa*). Holotype female; Costa Rica: Sarapiquí (BERLIN).

Exaerete Hoffmannsegg

- azteca* Moure, 1966:15. Holotype male; Mexico: Hidalgo, Jacala (LAWRENCE).
dentata (Linnaeus), 1758:657. (*Apis*). Holotype female; Trinidad (UPPSALA).
nitida (Perty), 1833:148. (*Chrysantheda*). Holotype female; Brazil: Piauí (MUNICH).
subcornuta (Romand), 1849:xxxvi. (*Chrysantheda*). Holotype male; Venezuela: Caracas (Repository ?).
frontalis (Guérin), 1845:458. (*Euglossa*). Type ?; French Guiana: Cayenne (Repository ?).
smaragdina (Guérin), 1845:458. (*Euglossa*). Lectotype female; Mexico: Yucatan (GENOA).
aurata Erichson, 1848:592. Holotype female; Guyana (Repository ?).
cyanescens Cockerell, 1926:657. Lectotype female; Trinidad (NEW YORK).
trochanterica (Friese), 1900:66. (*Chrysantheda*). Holotype female; Brazil: Pará (BERLIN).

LITERATURE CITED

- Blanchard, E. 1840. Orthoptères, Neuroptères, Hyménoptères, Lépidoptères, et Diptères. In F. L. Laporte, Histoire naturelle des animaux articulés, Annelides, Crustacés, Arachnides, Myriapodes et Insectes, Vol. 3. Dumeril, Paris, 672 pp.
- Cheesman, L. E. 1929. Hymenoptera collected on the "St. George" expedition in Central America and the W. Indies. Trans. Ent. Soc. Lond., 77:141-154.
- Cockerell, T. D. A. 1904. Descriptions and records of bees. Ann. Mag. Nat. Hist. Lond., 13:21-30.
- . 1912. New bees from Brazil. Psyche, 19:41-43.
- . 1914. Bees from Ecuador and Peru. J. N.Y. Ent. Soc., 22:306-308.
- . 1917. Descriptions and records of bees, no. 74. Ann. Mag. Nat. Hist. Lond., 19:473-481.
- . 1918. Bees from British Guiana. Bull. Amer. Mus. N.Y. 38:685-690.
- . 1922. Bees in the collection of the United States National Museum. 4. Proc. U.S. Nat. Mus. Wash., D.C., 60 art., No. 2413, 20 pp.
- . 1926. Descriptions and records of bees. CVIII-CXIII. Ann. Mag. Nat. Hist. Lond., 17:657-665.
- DeGeer, C. 1773. Memoirs pour servir a l'histoire des insectes. Pierre Hesselberg, Stockholm, vii + 696 pp.
- Dodson, C. H., R. L. Dressler, H. G. Hills, R. M. Adams, and N. H. Williams. 1969. Biologically active compounds in orchid fragrances. Science, 164:1243-1249.
- Dressler, R. L. 1978a. New species of *Euglossa* from Mexico and Central America. Rev. Biol. Trop., 26:167-185.
- . 1982a. New species of *Euglossa*. II. Rev. Biol. Trop., 30:121-129.
- . 1982b. New species of *Euglossa*. III. The *bursigera* species group. Rev. Biol. Trop., 30:131-140.
- . 1982c. New species of *Euglossa*. IV. The *cordata* and *purpurea* species groups. Rev. Biol. Trop., 30:141-150.
- . 1985. Euglossine bees of the Tambopata Reserved Zone, Madre de Dios, Peru. Rev. Per. Ent., 27:75-79.
- Ducke, A. 1902a. Beobachtungen über Blütenbesuch, erscheinungszeit, etc., der bei Pará vorkommenden Bienen. Allgem. Zs. Ent., 8:321-325.
- . 1902b. An especies Paraenses de genero *Euglossa*. Bol. Mus. Paraense, 3:561-577.
- Erichson, W. F. 1848. Die insecten in Schomburgks Reise in Guiana. Weber, Leipzig, 3:533-617.
- Fabricius, J. C. 1787. Mantissa insectorum, etc., Vol. 1. Christi. Gottl. Proft., Copenhagen, xx + 348 pp.
- . 1793. Entomologia systematica emendata at aucta, etc., Vol. 2. C. G. Profit, Hafniae, viii + 519 pp.
- . 1804. Systema Piezatorum. C. Reichard, Brunsvigae, xiv + 15-439 + 30 pp.
- Friese, H. 1898. Neue arten de bienengattung *Eulaema*. Termes. Fuzetek, Budapest, 21:203-206.
- . 1899. Monographie de bienengattung *Euglossa*. Termes. Fuzetek, Budapest, 22:142-157.
- . 1900. Bemerkungen zur bienengattung *Euglossa*. Termes. Fuzetek, 23:121-122.
- . 1903. Nachtrag zur monographie der bienengattung *Euglossa*. Ann. Mus. Nat. Hung., 1: 574-575.
- . 1923. Über einige neue *Euglossa*-arten. Konowia, 1:24-28.
- . 1925. Neue neotropische bienenarten. Stett. Ent. Zeitg., 86:1-41.
- . 1930. Über "Goldbienen" *Euglossa cordata* und verwandte. Jahrb. Abt. Syst., 59:131-138.
- . 1940. Zur biologie der *Euglossa*-arten. Zool. Jahrb. Abt. Syst., 74:157-160.
- Gribodo, G. 1882. Nuove specie d'imenotteri. Ann. Mus. Civ., Genoa, 18:265-168.
- Guérin Méneville, F. E. 1845. Description de quelques-uns des insectes les plus remarquables découverts par M. A. Delegorgue dan les pays des Boschimans des Amazoulous etc. pendant les années. Rev. Zool., 8:283-286.
- Hoffmannsegg, J. C. 1817. Entomologische bemerkungen dei gelegenheite de abhandlungen der Amerikanishce insecten. Weidem. Zool. Mag., 1:52.
- Kimsey, L. S. 1977. New species in the genera *Euplusia* and *Eufriesea*. Pan-Pac. Ent., 53:8-18.
- Latreille, P. A. 1838. In A. Drapiez, Dictionnaire classique d'histoire naturelle. Audouin, Vol. 4.
- Lepelletier, de St. F. 1841. Histoire naturelle des insectes, Hymenopteres, Vol. 2. Roret, Paris, 680 pp.
- and J. G. A. Serville. 1825. Encyclopedie methodique histoire naturelle. Insectes, Vol. 10.
- Linnaeus, C. 1758. Systema naturae, etc., 10th ed., Vol. 1. Laurentii Salvii, Holmiae, 824 pp.

- Mocsáry, A. 1896. Species hymenopterorum magnificae novae in collectione musaei nationalis hungarici. Termes. Fuzetek, Budapest, 19:3-6.
- . 1897. Species novae generis *Euglossa*. Termes. Fuzetek, Budapest, 20:442-446.
- . 1898. Species novae generum *Euglossa* et *Epicharis*. Termes. Fuzetek, Budapest, 21:497-500.
- . 1899. Species novae generis *Centris* Fabr. Termesz. Fuzetek, 22:251-255.
- . 1908. Species tres novae magnificae generis *Euglossa*. Ann. Mus. Nat. Hung., 6:580-583.
- Moure, J. S. 1943. Abelhas de batatais. Arq. Mus. Paranaense, 3:188-191.
- . 1947. Novos agrupamentos genericos e algumas especies novas de abelhas sulamericanas. Mus. Paranaense Pub. Avul., (3):1-37.
- . 1960. Notas sôbre os tipos de abelhas do Brasil descritas por Perty em 1833. Bol. Univ. Parana, Zool., (6):1-23.
- . 1963. Una nueva especie de *Eulaema* de Costa Rica. Rev. Biol. Trop., 11:211-216.
- . 1965. Some new species of euglossine bees. J. Kansas Ent. Soc., 38:266-277.
- . 1966 (1964). A key to the parasitic euglossine bees and a new species of *Exaerete* from Mexico. Rev. Biol. Trop., 12:15-18.
- . 1967a. Descrição de algumas especies de Euglossinae. Atas Simp. Biota Amaz., 5:373-394.
- . 1967b. A checklist of the known euglossine bees. Atas Simpos. Biota Amaz., 5:395-415.
- . 1968. Especies novas de *Euglossa* da America Central. Bol. Univ. Fed. Parana. Zool., 3:13-64.
- . 1969. The Central American species of *Euglossa* subgenus *Glossura* Cockerell. Rev. Biol. Trop., 15:227-247.
- . 1970. The species of euglossine bees of Central America belonging to the subgenus *Euglossella*. An. Acad. Brasil. Cienc., 42:148-157.
- . 1976. Notas sôbre os exemplares tipos de *Euplusia* descritos por Mocsáry. Studia Ent., 19:263-314.
- Olivier, G. A. 1789. Encyclopedie methodique naturelle. Insectes, Vol. 4.
- Packard, A. S. 1869. List of Hymenopterous and Lepidopterous insects by the Smithsonian Expedition to South America, under Prof. James Orton. Ann. Rep. Peabody Acad., I.
- Perty, M. 1833. Insecta Brasiliensia, fasc. 3. Pp. 125-224 in M. Perty, 1830-1833, Delectus animalium articulatum, etc. Monachii, 44 + 224 pp.
- Romand, B. E. de. 1849. Note sur l'appendice extraordinaire que presente la tête d'une *Chrysantheda subcornuta*. Bull. Soc. Ent. Fr., (2)7:36.
- Sakagami, S. F., S. Laroca, and J. S. Moure. 1967. Two Brazilian apid nests worth recording in reference to comparative bee sociology, with description of *Euglossa melanotricha* Moure. Ann. Zool. Jap., 40:45-54.
- Schrottky, C. 1902. Neue argentinische hymenopteren. Mus. Nac. Buenos Aires, 1(3):116-117.
- . 1907. Al conocimiento de los himenopteros del Paraguay. An. Cien. Paraguayos, 1(7):55-57.
- . 1911. Neue sudamerikanische Hymenoptera. Ent. Rdsch. Stuttgart, 28:38-39.
- . 1913. Neue sudamerikanische hymenopteren. Deutsche Ent. Zs., Berlin, 1913:702-708.
- Smith, F. 1854. Catalogue of hymenopterous insects in the collection of the British Museum. Brit. Mus. Nat. Hist. Lond., 2:381-382.
- . 1874. A revision of the genera *Epicharis*, *Centris*, *Eulaema* and *Euglossa*, belonging to the family Apidae, section Scopulipedes. Ann. Mag. Nat. Hist., 13:440-446.
- Westwood, J. O. 1840. In G. L. C. F. D. de Cuvier, Cuviers animal kingdom. London.